



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,087	08/22/2003	Karl-Franz Reinhart	10191/3189	1742
26646	7590	10/04/2004	EXAMINER	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			MILLER, TAKISHA S	
			ART UNIT	PAPER NUMBER
			2855	

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/647,087	<b>Applicant(s)</b> REINHART ET AL.	
	<b>Examiner</b> Takisha Miller	<b>Art Unit</b> 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br/>           Paper No(s)/Mail Date ____.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)<br/>           Paper No(s)/Mail Date. ____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: ____.</p> |
|--|---|

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8 and 10-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishida et al. (5,181,417)(hereinafter Nishida).

a. With respect to claims 1,2, 15 and 16, Nishida teaches a device for measuring a force in a predefined direction comprising a sensor element (1) having a sensing region and a carrier element (2). The sensor element (1) being connected to the carrier element (2). Nishida also includes a packaging element (3), the sensor element (1) and the carrier element (2) being at least partially surrounded by the packaging element (3), the carrier element (2) and the packaging element (3) being joined to one another in such a way that, in the predefined direction, a temperature-induced expansion of the sensor element (1), the carrier element (2) and the packaging element (3) is substantially compensated in relation to the sensing region of the sensor element (1)(Col. 4, lines 1-25)(Fig.2b).

b. With respect to claims 3 and 4, Nishida teaches a device for measuring a force in a predefined direction comprising a compensation element (5)(Fig.2b)(Col. 5, lines 51-58).

- c. With respect to claims 5 and 12, Nishida teaches a device for measuring a force in a predefined direction wherein the packaging element (3) includes a steel encasing tube (Fig. 2c)(Col. 8, lines 38-41).
- d. With respect to claims 6 and 7, Nishida teaches a device for measuring a force in a predefined direction further comprising a membrane (1a) wherein in one predefined temperature range, a force of the membrane (1a) acting on the sensing region is the same, independent of temperature (Col. 4, lines 21-37).
- e. With respect to claim 8, Nishida teaches a device for measuring a force in a predefined direction wherein the carrier element (2) and the packaging element (3) are joined together by welding (Col. 4, lines 54-55).
- f. With respect to claim 10, Nishida teaches a device for measuring a force in a predefined direction wherein the sensor element (1) includes a substrate material (13), the substrate material (13) being silicon on insulator (Col. 17, lines 36-39).
- g. With respect to claim 11, Nishida teaches a device for measuring a force in a predefined direction further comprising a connection element (4), the connection element (4) being directly or indirectly joined to the sensor element (1) using wire bonding (Fig.20)(Col. 16, lines 57-61).
- h. With respect to claim 13, Nishida teaches a device for measuring a force in a predefined direction wherein the carrier element (2) has a guidance function in the packaging element (3) due to a cross-section design of the carrier element (2)(Fig.20).

Art Unit: 2855

- i. With respect to claim 14, Nishida teaches a device for measuring a force in a predefined direction wherein the packaging element (3) includes a packaging head (3a) that is connected to a steel jacket tube (91/9)(Fig.2c).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al. (5,181,417)(hereinafter Nishida). Nishida discloses a carrier element (2) and a packaging element (3) joined together by welding. The use of the particular type of welding process claimed by applicant, i.e., laser welding, absent any criticality, is considered to be nothing more than a choice of engineering skill because 1) neither non-obvious nor unexpected results, i.e., results which are different in kind and not in degree from the results of the prior art, will be obtained as long as the carrier element and packaging element are joined together as already suggested by Nishida, 2) the welding process claimed by Applicant and the welding process used by Nishida are well known alternate types of welding processes which will perform the same function, if one is replaced with the other, and 3) the use of the particular type of welding process by Applicant is considered to be nothing more than the use of one of numerous and well known alternate types of welding processes that a person having ordinary skill in the art would have been able to provide using routine experimentation in order to combine the carrier element

Art Unit: 2855

and packaging element as already suggested by Nishida. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nishida to include laser welding which is well known in the art (MPEP 2144).

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Haefner et al. (6,487,898) teach an engine cylinder pressure sensor with thermal compensation element.


Krempl (4,169,387) teaches a pressure transducer for mechanical measured variables.

Marki et al. (4,982,608) teach high-pressure transducers.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Takisha Miller whose telephone number is (571) 272-2184. The examiner can normally be reached on Monday - Friday (7:00 am - 3:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
EDWARD LEFKOWITZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800